Bureau of Land Management
Buffalo Field Office
Bar C Draw, Lower Red Fork, and Nelly Carr Allotments Grazing Lease Transfer, WY-070-EA11-160

1.0 Introduction

PROJECT TITLE: Bar C Draw, Lower Red Fork, and Nelly Carr Allotments 10-Year Term Grazing Lease Transfer and Issuance

LOCATION: The three pastures of the Johnson Draw Allotment, which are being divided to create three new allotments:
Bar C Draw Allotment (02401): T. 42 N., R. 83 W. Section 17: N½N½; Sec. 18: Lots 2, 3, 4, SE ¼NW¼, SE¼SW¼, SW¼SE¼; Sec. 19: Lots 1, 2, 3, 4, E½W½, W½E½, SE¼SE¼; Sec. 20: SE¼SW¼; Sec. 29: SE¼SE¼, SW¼NW¼, NW¼NE¼; Sec. 30: Lots 1, 2, E½NW¼, NE¼; Sec. 32: E½NE¼.
Lower Red Fork Allotment (15927): T. 43 N., R. 83 W. Section 15: Lots 4, 5; Sec. 22: Lots 1, 2, 3, 4, 5, 6, 7, 8, W½E½; Sec. 26: Lots 6, 7; Sec. 27: Lots 1, 2, 3, 4; Sec. 35: Lot 2.
Nelly Carr Allotment (16029): T. 44 N., R. 83 W. Section 34: SW¼, E½NE¼.
(see attached maps)

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CASEFILE NUMBERS: 4907671, 4913819, 4913924

APPLICANTS: Lyle F. Lund, Thomas Hirdes, & Pass Creek Land, LLC

This site-specific Environmental Assessment (EA) is tiered to and incorporates by reference the Buffalo Resource Management Plan (RMP) dated October 4, 1985, and the 2001 amendment. This EA follows the format recommended in Chapter 8 of BLM Manual H-1790-1, National Environmental Policy Act Handbook.

1.1 Background
Lyle Lund has divided and sold portions of his base property to Thomas Hirdes and Pass Creek Land, LLC. Each of three pastures of the Johnson Draw Allotment (#02401), have associated base property. Because this base has been divided into three parts, the grazing preference attached to each pasture also needs to be divided, creating three new allotments. As outlined in 43 CFR 4110, Lyle Lund, Pass Creek Land, and Thomas Hirdes should have preference in obtaining the grazing privileges attached to this property.

1.2 Purpose and Need for the Proposed Action
The BLM promotes healthy sustainable rangeland ecosystems and provides for the sustainability of the western livestock industry and communities that are dependent upon productive, healthy public rangelands while complying with land use plans and multiple use objectives, including environmental and economic values, as provided in 43 CFR 4100, the Taylor Grazing Act of

1934 and the Federal Land Policy and Management Act of 1976. The proposed action would allow livestock grazing on public land through the exercise of grazing preference attached to controlled base property while considering these multiple use objectives (43 CFR 4110).

The need for the action is the requirement that an individual or group desiring to graze livestock on public land must hold a valid grazing authorization in the form of a permit or lease; this lease may be balanced with other uses of public land. The current grazing lessee has a preference to receive the authorization, if grazing is to continue on the associated allotment. The current grazing leases were issued in 2009 under Public Law 106-291 allowing for authorization of grazing leases until completion of environmental analysis.

1.3 Decision to be Made

The BLM will decide whether or not to divide and transfer the grazing preference on the former Johnson Draw Allotment from Lyle Lund to Lyle Lund, Pass Creek Land, LLC, and Thomas Hirdes. The BLM will also decide whether or not to issue new grazing leases, with no change in terms and conditions relative to each pasture, to Lyle Lund for the Bar C Draw Allotment, Pass Creek Land, LLC for the Nelly Carr Allotment, and Thomas Hirdes for the Lower Red Fork Allotment.

1.4 Conformance with Land Use Plan and Other Laws, Regulations, and Policies

The Proposed Action is in conformance with the Record of Decision for the Buffalo Resource Management Plan approved October 4, 1985, the 2001 amendment, and the Powder River Basin Oil & Gas Project Final Environmental Impact Statement and Resource Management Plan Amendment (PRB FEIS) approved April 30, 2003. The action is also consistent with the land use plan terms and conditions as required by 43 CFR 1610.5-3(a). The Buffalo RMP EIS analyzed the impacts of grazing.

This Environmental Analysis fulfills the 1969 National Environmental Policy Act (NEPA) requirement for site-specific analysis. The Proposed Action is in accordance with the following laws and/or regulations, other plans, and is consistent with Federal, State, and local laws, regulations:

- Taylor Grazing Act of June 30, 1934
- Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.)
- Public Rangelands Improvement Act of 1978
- Endangered Species Act of 1973
- 43 CFR § 4100 Grazing Administration-Exclusive of Alaska
- Clean Water Act Section 303d
- National Historic Preservation Act of 1966 Section 106
- National Environmental Policy Act of 1969
- Sikes Act of 1969 (Habitat Improvement on Public Land)
- Fish and Wildlife Improvement Act of 1978
- Executive Order 13186 – Responsibilities of Federal Agencies to Protect Migratory Birds
- Grazing Regulations as codified in 43 CFR § 4100 as amended in 2005

- BLM Instruction Memorandum No. WY-2010-012, Greater Sage-Grouse Habitat Management Policy on Wyoming BLM Administered Public Lands including the Federal Mineral Estate (Maintained into the Buffalo RMP)
- DOI Secretarial Order No.3310—Protecting Wilderness Characteristics on Lands Managed by the BLM, Dec. 2010

1.4.1 Wyoming Standards for Rangeland Health

Particularly applicable to livestock grazing management by the BLM, the Wyoming Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management were developed and approved by the Secretary of the Interior on August 12, 1997. They address watersheds, ecological condition, water quality and habitat for special status species. These policies and guidelines are critical to achieving ecologically sustainable range management.

The regulation at 43 CFR 4180.1 details four fundamentals of rangeland health. They are:

1. Watersheds are in or are making progress toward properly functioning physical condition, including their upland, riparian-wetland, and aquatic components; soil and plant conditions support water infiltration, soil moisture storage, and the release of water that are in balance with climate and landform and maintain or improve water quality, water quantity, and timing and duration of flow.

2. Ecological processes including the hydrologic cycle, nutrient cycle, and energy flow are maintained, or there is significant progress toward their attainment, in order to support healthy biotic populations and communities.

3. Water quality complies with State water quality standards and achieves, or is making significant progress toward achieving established BLM management objectives such as meeting wildlife needs.

4. Habitats are, or are making significant progress toward, being restored or maintained for Federal threatened and endangered species, Federal Proposed, Category 1 and 2 Federal Proposed Candidate and other special status species.

The BLM developed the Wyoming Standards for Healthy Public Rangelands and Guidelines for Livestock Grazing Management (S&Gs) to achieve the four fundamentals of rangeland health detailed above. These Standards relate the minimal acceptable conditions for BLM administered public rangelands, including the health, productivity, and sustainability of the land. The achievement of a Standard is determined by observation, measuring, and monitoring conditions in the field and is measured on a watershed scale. If livestock grazing practices are found to be among factors contributing to a failure to meet a Standard, corrective action must be developed and implemented before the next grazing season in accordance with the grazing regulations. Guidelines provide reasonable, responsible, and cost-effective management practices at the grazing allotment and watershed levels to attain and maintain rangeland Standards. These management practices either maintain existing desirable conditions or move rangelands toward statewide Standards within reasonable timeframes.

The six Standards for Healthy Rangelands are:

> Standard 1: Within the potential of the ecological site (soil type, landform, climate, and geology), soils are stable and allow for water infiltration to provide for optimal plant growth and minimal surface runoff.
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> Standard 2: Riparian and wetland vegetation have structural, age, and species diversity characteristic of the state of channel success and is resilient and capable of recovering from natural and human disturbance in order to provide forage and cover, capture sediment, dissipate energy, and provide for ground water recharge.
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> Standard 3: Upland vegetation on each ecological site consists of plant communities appropriate to the site which are resilient, diverse, and able to recover from natural and human disturbance.
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> Standard 4: Rangelands are capable of sustaining viable populations and a diversity of native plant and animal species appropriate to the habitat. Habitats that support or could support threatened species, endangered species, species of special concern, or sensitive species will be maintained or enhanced.
>
> Standard 5: Water Quality meets state standards.
>
> Standard 6: Air Quality meets state standards.

The Buffalo Land Use Plan has been amended to adopt the Wyoming Standards for Healthy Rangelands. An assessment of the Wyoming Standards for Healthy Rangelands was conducted on the Johnson Draw Allotment (now Bar C Draw, Lower Red Fork, and Nelly Carr Allotments) on September 17, 2008. All standards were met.

1.5 Scoping and Issues

The BLM decision-making process is conducted in accordance with the requirements of the Council on Environmental Quality (CEQ) regulations implementing the National Environmental Policy Act (NEPA), and the United States Department of Interior (USDI) and BLM policies and procedures implementing NEPA. NEPA and the associated regulatory and policy framework require federal agencies to involve the interested public in their decision-making.

Internal scoping was conducted on this EA. The following issues were identified:

- How would the proposed action affect current livestock grazing management?
- Would the proposed action impact riparian areas?
- Would the proposed action impact invasive species?
- Would and how would the proposed action affect any special status species, particularly sage-grouse (candidate species)?
- Would the proposed action impact big game habitat?
- Would the proposed action impact migratory bird habitats or populations?
- Would the proposed action impact cultural resources and/or lands with wilderness characteristics?

This EA is sent to interested parties of record and is posted on the Buffalo Field Office (BFO) website to solicit public and cooperating agency comments over a 30-day period. The BFO uses received comments to assess whether the EA covers the issues raised and adequately addresses their significance. The BFO's response consists of either addressing public comments in the decision record or results in the preparation of a new EA.

2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 Alternative A – No Livestock Grazing

Under this alternative no livestock grazing would be permitted on the Bar C Draw, Lower Red Fork, and Nelly Carr Allotments. The previous grazing leases would be cancelled in accordance with 43 CFR parts 4100 and 1600 to eliminate grazing on the allotments.

2.2 Alternative B- Proposed Action – Transfer of Grazing Preference and Issuance of Leases without Modification

The proposed action is for the BLM to transfer partial grazing privileges from Lyle F. Lund to Thomas Hirdes and Pass Creek Land, LLC, and to issue new 10-year term grazing leases to Thomas Hirdes for the Lower Red Fork Allotment and Pass Creek Land for the Nelly Carr Allotment. Lyle Lund would retain grazing preference and be issued a new 10-year term grazing lease on the Bar C Draw Allotment. There would be no modifications to the current terms and conditions for each pasture of the former Johnson Draw Allotment outlined in the existing lease held by Lyle Lund. The details of these BLM grazing leases are listed below in Table 1.

Table 1

Allotment	Livestock		Season of Use	% PL	AUMs	Type Use
	Number	Kind				
Bar C Draw Allotment (02401)	57	Cattle	5/01 – 11/24	35	136	Active
Lower Red Fork Allotment (15927)	5	Cattle	03/01—02/28	100	60	Active
Nelly Carr Allotment (16029)	6	Sheep	03/01-02/28	27	4	Active
	10	Cattle			32	

*BLM recognizes that these allotments consist primarily of non-federal lands. As such, BLM will not limit the season of use or number of livestock as long as grazing use is not to the detriment of the public lands. The lease schedule shown is primarily for billing purposes.

The proposed action would transfer grazing privileges to Thomas Hirdes and Pass Creek Land from Lyle F. Lund and issue new 10-year term grazing leases to Thomas Hirdes, Pass Creek Land, and Lyle F. Lund. All applicants are currently in good standing with the Bureau of Land Management (BLM) and meet all mandatory qualifications for obtaining a grazing lease as specified in 43 CFR 4110.1 and 4110.2. In accordance with Title 43 CFR 4130.2(a), "Grazing permits or leases shall be issued to qualified applicants to authorize use on the public lands and other lands under the administration of the Bureau of Land Management that are designated as available for livestock grazing through land use plans."

No projects or other surface disturbing activities are proposed in connection to these lease issuances and transfers. Any range improvement projects associated with these allotments would be analyzed under separate, site-specific Environmental Assessments.

3.0 AFFECTED ENVIRONMENT

3.1 Introduction

3.1.1 Location

The Bar C Draw Grazing Allotment is about 14 miles southwest of Kaycee, Wyoming in Johnson County. The Lower Red Fork and Nelly Carr Allotments are about 8 miles west of Kaycee. The three allotments are mixtures of public, private, and state lands (lands managed by the Office of State Lands and Investments). Private lands compose the majority of each allotment, with five parcels of public land totaling 1464 acres in the Bar C Draw Allotment, four parcels of public land totaling 584 acres in the Lower Red Fork allotment, and one parcel of 240 acres of BLM land in the Nelly Carr allotment. There is no legal public access to the public lands in the Lower Red Fork and Nelly Carr allotments. Tenuous public access to about 1200 acres of public land in the Bar C Draw allotment is available after a hike of approximately 2.5 miles from the Barnum Road.

3.1.2 General Description

The Bar C Draw, Lower Red Fork, and Nelly Carr Allotments are typical of the land forms, soils, and vegetation in the area of influence for the Upper Powder River drainage system. Differences in dominant species within the allotments vary with soil type, aspect, topography, and water availability. Annual precipitation is the principal factor limiting forage production. Floodplains and lowlands with intermittent streams and along the Red Fork Powder River are the most productive sites and the very steep escarpments, ridges, and slopes of the Red Wall are the least productive. All stream channels found in the Bar C Draw and Nelly Carr allotments are intermittent streams, while the Red Fork Powder River runs, on private land, through the middle of the Lower Red Fork allotment.

The public lands in these allotments are clearly lacking in wilderness characteristics due to their small size (less than 5,000 acres).

The soils within the Bar C Draw, Lower Red Fork, and Nelly Carr Allotments vary greatly depending on topographic location, slope, elevation, and precipitation. The climate of the area is characterized by relatively low amounts of precipitation, averaging between 10 and 14 inches annually. The majority of soils within the allotments are loams and shallow loams. A substantial portion of the public land in the three allotments is composed of rock outcrops, shale rock lands, and badlands.

Wyoming big sagebrush is a significant component of the plant community associated with loamy sites, with densities ranging from 2-12% throughout the allotments. Cool-season mid-grasses make up the majority of the understory with the balance made up of short warm-season grasses, introduced annual grasses, and miscellaneous forbs. The dominant cool season mid-grass species include green needlegrass (*Nassella viridula*), needleandthread (*Hesperostipa comata*), and rhizomatous wheatgrasses. Grasses can account for up to 75% of the vegetation in this type of ecological site. With an elevation of approximately 5300 feet, the growing season is short, consisting of the months of April through mid-August.

Historically, native plants in northeastern Wyoming evolved under prehistoric conditions which included grazing and browsing by bison and other native ungulates, and an associated low frequency of fire. This community is well suited to grazing by both domestic livestock and wildlife year round.

3.1.3 Energy Development

The BLM permits federal mineral development (coal bed natural gas, conventional oil, and coal) in the Powder River Basin. This includes federal minerals below federal and/or private (split estate) surface. Environmental Assessments (EAs) are prepared, as required by the National Environmental Policy Act of 1969 (NEPA), for this federal mineral development. In general, companies submit proposals in the form of Plans of Development (PODs) that may consist of one to 200 wells. Currently the Bar C Draw, Lower Red Fork, and Nelly Carr Allotments are not located within any mineral development. The effects of any future mineral development would be analyzed in a project-specific EA.

The following are not affected and will not be further analyzed:

Air Quality
Areas of Critical Environmental Concern (ACEC)
Environmental Justice
Prime or Unique Farmlands
Flood Plains
Hazardous or Solid Wastes
Mineral Resources
Native American Religious Concerns
Paleontology
Recreation
Soils
Traditional Cultural Properties
Visual Resource Management
Water Quality and Prime or Sole Source of Drinking Water
Wild and Scenic Rivers
Wilderness Values

3.2 Cultural Resources

Class III inventory for cultural resources has not occurred on the majority of the allotments, although the Wyoming Cultural Records Office database reveals that inventories related primarily to range improvement, buried utilities, and WYDOT road improvements, as well as class II sampling surveys, have discovered cultural sites. The Bar C Draw, Lower Red Fork, and Nelly Carr Allotments contain eight known cultural sites, two of which are eligible for the National Register of Historic Places (NRHP), and six remain unevaluated for the NRHP. There may be many more unrecorded cultural sites, some which may be eligible for listing on the National Register, within the allotments.

3.3 Livestock Grazing

In 1985, BLM established three categories for allotments to identify areas where management was potentially needed, as well as to prioritize workloads and the use of range improvement funds. Allotments were classified as Improve Existing Resource Conditions (I), Maintain Existing Resource Conditions (M), or Custodial Management (C) (USDI 2008). The Bar C Draw, Lower Red Fork, and Nelly Carr Allotments are all classified as category "C" allotments, meaning their management is minimal in nature, due to the small amount of public land within the allotments. The BLM's rationale for this classification is that there are no identified resource problems, and the size and continuity of the public land is not conducive to more intensive management by the BLM. The allotments have a low potential for yielding a positive return on public investment in management or rangeland project development.

The Bar C Draw Allotment consists of 1464 acres of public land, 160 acres of state land, and 2416 acres of deeded land. There are 136 AUMs associated with the federal lands in the allotment. The Lower Red Fork Allotment consists of 584 acres of public land and 1016 acres of deeded land, with 60 AUMs associated with the federal lands. The Nelly Carr Allotment consists of 240 acres of public land and 640 acres of private land. There are 36 AUMs associated with the federal lands in the allotment. In all three allotments, public land parcels are grazed in conjunction with State and deeded lands.

3.4 Invasive Species/Noxious Weeds

Invasive species and noxious weeds are known to exist in the affected environment. The primary species in the allotments are Russian knapweed (*Acroptilon repens*), spotted knapweed (*Centaurea maculosa*), and diffuse knapweed (*Centaurea diffusa*). Downy brome *(Bromus tectorum*), and to a lesser extent, Japanese brome (*Bromus Japonicus)* are also present in the allotments. These *Bromus* species occur in such high densities and numerous locations throughout Northeast Wyoming that a control program is not considered feasible at this time.

3.5 Wetlands and Riparian Zones

The Red Fork Powder River runs through the middle of the Lower Red Fork Allotment. Nearly all of the 3 miles of river within the allotment are located on private land. A 0.25-mile section meanders close to the BLM boundary, and could be located on public land in some years. Due to its short length, and the lack of public land upstream and downstream of this site, this riparian area is not conducive to more intensive management. Any other stream channels found in these three allotments are intermittent streams. This means that water flow generally occurs during the wet season (50% of the year or less) so water typically only flows in these channels during times such as spring runoff. Water ceases to flow in these channels during drier periods but may still continue to run underground. As such, there may or may not be riparian vegetation associated with intermittent stream channels. Also, they are not a reliable source of water for livestock or wildlife.

3.6 Wildlife, Threatened & Endangered and Sensitive Species

Wildlife evaluations were conducted to assess the occurrence of selected wildlife species and their habitats, as well as to evaluate the anticipated effects associated with issuance of these grazing leases on the Bar C Draw, Lower Red Fork, and Nelly Carr Allotments. The evaluations included selected individual species or species groupings that are considered ecologically, economically, or socially important.

Evaluation methods included comparison of aerial imagery (1994 to 2009) and review of wildlife geospatial datasets (available at the Buffalo BLM Field Office). Datasets included occurrence information for big game, raptors, bald eagles, sage-grouse, sharp-tailed grouse, mountain plover, black-tailed prairie dogs, and sagebrush in the project area.

Wildlife habitats occurring on these three allotments resulted from a complex history of natural and man-caused influences. Important natural influences included short- and long-term climate variation, infrequent wildfire (Baker 2006), and ungulate grazing; especially by bison (Mack and Thompson 1982). From about 1880 to 1910 the Powder River Basin (including these allotments) was influenced by bison removal and replacement with "vast numbers" of cattle (Cassity 2007) and excessive numbers of sheep (Patterson 1952). The compounding impacts of cattle and sheep overstocking with climate may have initiated the ongoing epicycle of gully erosion that is evident throughout the Basin including in the Bar C Draw, Lower Red Fork, and Nelly Carr allotments (Leopold and Miller 1954). Early range degradation and reduced wildlife populations were followed by recovery with enactment of the Taylor Grazing Act of 1934 (Patterson 1952).

The following tables summarize the affected environment relative to selected wildlife.

Table 2. Summary of Sensitive Species Habitat and Project Effects.

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
Amphibians				
Northern leopard frog (*Rana pipiens*)	Beaver ponds, permanent water in plains and foothills (SS Policy). Swampy, cattail marshes on the plains (WGFD CWCS).	S	MIIH	Suitable habitat present in the Lower Red Fork and Bar C Draw Allotments. Inappropriate grazing near water could adversely affect.
Columbia Spotted frog (*Ranus pretiosa*)	Breeds in the shallows of lakes, ponds, marshes, and small streams (NatureServe).	S	MIIH	Suitable habitat present in the Lower Red Fork and Bar C Draw Allotments. Inappropriate grazing near water could adversely affect.
Birds				
Baird's sparrow (*Ammodramus bairdii*)	Grasslands, weedy fields (SS Policy). Un- or lightly grazed mixed-grass prairie, wet meadows, tallgrass prairie. Prairie w/ scattered low bushes and matted vegetation (NatureServe). In dry years, grassy slough bottoms, alkali flats, and depressions in low lying grasslands.	S	MIIH	Trampling of nests may occur. Negligible impacts from livestock or humans disrupting breeding, dislodging nests, or causing adult to leave eggs or chicks unattended.
Bald eagle (*Haliaeetus leucocephalus*)	Mature forest cover often within one mile of large water body (SS Policy). Nests near large lakes and rivers in forested habitat wher adequate prey and old, large-diameter cottonwood or conifer trees are available for nesting (WGFD CWCS). Migrating and wintering eagles congregate near open water areas where concentrations of prey are available, such as carcasses of ungulate species, and spawning areas for kokanee, trout, and other fish (WGFD CWCS).	K	NI	Roosting and nesting habitat is present within the allotments. Bald eagles may use the area for foraging. At least one individual has been observed less than 2 miles from the Lower Red Fork Allotment. Activities associated with ongoing livestock grazing operations are not likely to occur to such an extent that foraging behavior will be disrupted.
Brewer's sparrow (*Spizella breweri*)	Basin-prairie shrub (SS Policy). Closely associated with sagebrush shrublands that have abundant, scattered shrubs and short grass (WGFD CWCS).	S	MIIH	Trampling of nests may occur. Negligible impacts from livestock or humans disrupting breeding, dislodging nests, or causing adult to leave eggs or chicks unattended.
Burrowing owl (*Athene cunicularia*)	Grasslands, basin-prairie shrub (SS Policy). Prefers open prairie, grassland, desert, and shrub-steppe habitats, and may also inhabit agricultural areas. It depends on mammals that dig burrows, which it uses for nesting, roosting, and escape (WGFD CWCS).	NS	BI	Burrowing owls prefer grazed areas and use cow manure to line their nests.
Ferruginous hawk (*Buteo regalis*)	Basin-prairie shrub, grasslands, rock outcrops (SS Policy). Semi-arid open country, primarily grasslands, basin-prairie shrublands, and badlands (WGFD CWCS). Requires large tracts of relatively undisturbed rangeland and nests in rock outcrops, the ground, cutbanks, cliff ledges, or trees (WGFD CWCS).	S	NI	Ferruginous hawks may forage in this area. Livestock activity should not affect foraging behavior.
Loggerhead shrike (*Lanius ludovicianus*)	Basin-prairie shrub, mountain-foothill shrub (SS Policy). Grasslands interspersed with scattered trees and shrubs that provide nesting and perching sites.	S	MIIH	Ongoing livestock operations will not result in reduced shrub cover or habitat fragmentation. Nests may be toppled by livestock.

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
Long-billed curlew (*Numenius americanus*)	Grasslands, plains, foothills, wet meadows (SS Policy). Inhabits a variety of grassland types ranging from moist meadow grasslands to agricultural areas to dry prairie upland, usually near water. Prefers a complex of shortgrass prairies, agricultural fields, wet and dry meadows and prairies, and grazed mixed-grass and scrub communities. Nests on the ground in habitat that includes grass <12", bare ground, shade, abundant invertebrate prey, and a minimum on 40 acres of suitable habitat (WGFD CWCS).	NS	NI	Suitable habitat may be present on private land in the allotments.
Northern goshawk (*Accipiter gentilis*)	Conifer and deciduous forests (SS Policy). Mixed coniferous habitat of a wide variety of ages, structural conditions, and successional stages. Nests in mature stands with multilayered canopies with open understory, small openings, and water within 0.25 miles. Nest stands often on slopes with northerly exposures or in drainages or canyon bottoms protected by such slopes. Post-fledging area is a mosaic of forest types that provide hiding cover and abundant prey. Foraging area may include a variety of forest types and structures but most often consists of forests with a high density of large trees, high canopy closure, high basal area, and relatively open understories, interspersed w/ shrublands and openings with perching trees to observe prey. Winter habitat probably includes a variety of vegetation types, such as forests, woodlands, shrublands, and forested riparian strips (WGFD CWCS).	NP	NI	Forested habitat not present.
Peregrine falcon (*Falco peregrinus*)	Cliffs (SS Policy). Forages in open woodlands and forests, shrub-steppe, grasslands, marshes, and riparian habitats. Nests in cliffs that are usually proximate to habitats with abundant prey (WGFD CWCS).	NS	NI	Nest substrate is present. No known breeding pairs in proximity.
Sage sparrow (*Amphispiza billneata*)	Basin-prairie shrub, mountain-foothill shrub (SS Policy). Considered a sagebrush obligate. Inhabits prairie and foothills shrubland habitat where sagebrush is present. Prefers shrublands with tall shrubs and low grass cover, where sagebrush is clumped in a patchy landscape. Requires a large block of unfragmented habitat to successfully breed and survive (WGFD CWCS).	S	MIIH	Nests may be trampled. Cover may be affected.
Sage thrasher (*Oreoscoptes montanus*)	Basin-prairie shrub, mountain-foothill shrub (SS Policy). Considered a sagebrush obligate. Inhabits prairie and foothills shrubland habitat where sagebrush is present. Prefers shrublands with tall shrubs and low grass cover, where sagebrush is clumped in a patchy landscape (WGFD CWCS).	S	MIIH	Nests may be trampled. Uncommon cowbird host, which are associated with cattle. May be more susceptible to higher parasitism pressure.
Trumpeter swan (*Cygnus buccinator*)	Lakes, ponds, rivers (SS Policy). Inhabits shallow marshes, ponds, lakes, and river oxbows. Prefers stable, quiet, and shallow waters where small islands, muskrat houses, or dense emergent vegetation provide nesting and loafing sites.	NP	NI	Habitat not present.

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
	Nutrient-rich water, with dense aquatic plant and invertebrate growth, provide the most suitable habitat. Winter habitat must provide extensive beds of aquatic plants that remain ice-free. In Wyoming, cold temps and ice restrict trumpeters to sites where geothermal waters, springs, or outflow from dams maintain ice-free areas (WGFD CWCS).			
White-faced ibis (*Plegadis chihi*)	Marshes, wet meadows (SS Policy). Inhabits marshes, wet-moist meadows, lakes, and irrigated meadows. Nests on the ground in bulrushes, cattails, or reeds; on a floating mat; or in a low tree.	NS	NI	Habitat may be present on private lands in the allotments.
Yellow-billed cuckoo (*Coccyzus americanus*)	Open woodlands, streamside willow and alder groves (SS Policy). Nests primarily in large stands of cottonwood-riparian habitat below 7000 feet, including such habitats that occur in urban areas. It is a riparian obligate species that prefers extensive areas of dense thickets and mature deciduous forests near water, and requires low, dense, shrubby vegetation for nest sites.	S	MIIH	Suitable habitat is present. Nests may be disturbed by livestock.
Migratory bird species (Various)	Multiple vegetation types are used for breeding, foraging and wintering, with habitat types ranging from grasslands and shrub-steppe to woodlands and riparian areas.	K	MIIH	Trampling of nests may occur. Negligible impacts from livestock or humans disrupting breeding, dislodging nests, or causing adult to leave eggs or chicks unattended. Ongoing livestock operations should not create significant additional impacts.
Fish				
Yellowstone cutthroat trout (*Oncoryhynchus clarki bouvieri*)	Mountain streams and rivers in Tongue River drainage	NP	NI	Habitat not present.
Mammals				
Black-tailed prairie dog (*Cynomys ludovicianus*)	Prairie habitats with deep, firm soils and slopes less than 10 degrees (SS Policy). Inhabits dry, flat, open, shortgrass and mixed-grass grasslands with low, relatively sparse vegetation, including areas overgrazed by cattle. Constructs burrows in fine to medium soils (WGFD CWCS).	NS	NI	No towns present. Prairie dogs often prefer habitats grazed by livestock.

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
Fringed myotis (*Myotis thysanodes*)	Conifer forests, woodland chaparral, caves and mines (SS Policy). Found in a wide range of habitats, including coniferous forests, woodlands, grasslands, and shrublands. Probably most common in xeric woodlands, such as juniper, ponderosa pine, and Douglas-fir. Typically forages over water, along forest edges, or within forests and woodlands. During summer, uses a variety of roosts, including rock crevices, tree cavities, caves, abandoned mines, and buildings. During winter, it hibernates in caves, abandoned mines, and buildings (WGFD CWCS). Must remain within commuting distance of drinking water. Roosts in rock crevices that typically face southeast or southwest and are in low elevation forests or woodlands (WGFD Bat Conservation Plan).	S	MIIH	Water sources available within allotments. Roost sites are likely available. Roosting individuals may occasionally be trampled.
Long-eared myotis (*Myotis evotis*)	Conifer and deciduous forest, caves and mines (SS Policy). Primarily inhabits coniferous forest and woodland, including juniper, ponderosa pine, and spruce-fir. Typically forages over rivers, streams, and ponds within the forest-woodland environment. During summer, it roosts in a wide variety of structures, including cavities in snags, under loose bark, stumps, buildings, rock crevices, caves, and abandoned mines. During winter, it probably hibernates primarily in caves and abandoned mines (WGFD CWCS). Occasionally found in cottonwood riparian areas, basins, and sagebrush grasslands where roost sites are available (WGFD Bat Conservation Plan). Most likely found in areas close to a water source. May also occur more frequently in suitable habitat near rock outcroppings or cliffs. Primarily forages over rivers, streams, and ponds within the forest-woodland environment. Also forages over open areas such as campgrounds, small forest openings, and edges, although foraging areas are most likely to be close to a water source. Large-diameter conifer snags provide primary roosting habitat (WGFD Bat Conservation Plan).	S	MIIH	Some small patches of forested habitat are present in the allotments. Roosting individuals may be disturbed or trampled. Foraging behavior should not be affected.
Spotted bat (*Euderma maculatum*)	Cliffs over perennial water (SS Policy). Occupies a wide variety of habitats, from desert scrub to coniferous forest. Most often observed in low deserts and basins and juniper woodlands. Roosts in cracks and crevices in high cliffs and canyons. May occasionally roost in buildings, caves, or abandoned mines, although cliffs are the only roosting habitat in which reproductive females have been located (WGFD CWCS). Often occurs in association with canyons, prominent rock features, and permanent water sources. In desert environments, it forages in canyons, in the open, or over riparian vegetation. All recorded occurrences of spotted bats in WY were close to a permanent water source (WGFD Bat Conservation Plan).	S	MIIH	Cliffs and perennial water sources present. Roost sites likely available. Roosting individuals may occasionally be trampled.

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
Swift fox (*Vulpes velox*)	Grasslands (SS Policy). Inhabits shortgrass and mixed-grass prairies. Often uses highway and railroad ROWs, agricultural areas, and sagebrush-grasslands. Closely associated w/ prairie dog colonies and uses underground dens year-round. Selects habitat with low-growing vegetation, relatively flat terrain, friable soils, and high den availability (WGFD CWCS).	S	MIIH	Inappropriate grazing could reduce hiding cover and increase susceptibility to predation.
Townsend's big-eared bat (*Corynorhinus townsendii*)	Caves and mines (SS Policy). Occupies a variety of xeric to mesic habitats, including coniferous forests, juniper woodlands, deciduous forests, basins, and desert shrublands, and is absent only from the most extreme deserts and highest elevations. Requires caves or abandoned mines for roost sites during all seasons and stages of its life cycle, and its distribution is strongly correlated with the availability of these features (WGFD CWCS). May be limited to areas with reliable, accessible sources of drinking water. Forages along forest and woodland edges, riparian corridors, and in open areas near wooded habitat. May avoid open, grazed pasture land.	S	NI	Availability of roost sites is unknown, but foraging habitat is present. Ongoing livestock grazing unlikely to affect prey abundance or availability of foraging habitat.
Plants				
Limber Pine	High-elevation pine, often marking the tree line either on its own or with Whitebark Pine (*Pinus albicaulis*), either of the Bristlecone pines, or Lodgepole Pine (*Pinus contorta*). Found in steeply-sloping, rocky, windswept terrain in the Rocky Mtns.	NP	NI	Habitat not present
Porter's sagebrush (*Artemisia porteri*)	Sparsely vegetated badlands of ashy or tufaceous mudstone and clay slopes 5300-6500 ft.	NP	NI	Habitat not present
William's wafer parsnip (*Cymopterus williamsii*)	Open ridgetops and upper slopes with exposed limestone outcrops or rockslides, 6000-8300 ft.	S	MIIH	Habitat is present. Individual plants may be trampled or dislodged.

Presence
K - Known, documented observation within project area.
S - Habitat suitable and species suspected, to occur within the project area.
NS - Habitat suitable but species is not suspected to occur within the project area.
NP - Habitat not present and species unlikely to occur within the project area.
Project Effects
NI - No Impact.
MIIH - May Impact Individuals or Habitat, but will not likely contribute to a trend towards Federal listing or a loss of viability to the population or species.
WIPV -Will Impact Individuals or Habitat with a consequence that the action may contribute to a trend towards Federal listing or cause a loss of viability to the population or species.
BI - Beneficial Impact

Table 3. Summary of Threatened and Endangered Species Habitat and Project Effects

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
Endangered				
Black-footed ferret (*Mustela nigripes*)	Black-tailed prairie dog colonies or complexes > 1,000 acres.	NP	NE	Habitat not present. No prairie dog colonies of sufficient size.

Threatened				
Blowout penstemon (*Penstemon haydenii*)	Unstable, sandy blow-outs and active sand dunes	NP	NE	Habitat not present
Ute ladies'-tresses orchid (*Spiranthes diluvialis*)	Riparian areas with permanent water	NP	NE	Habitat not present
Candidates for listing				
Greater sage-grouse (*Centrocercus urophasianus*)	Basin-prairie shrub, mountain-foothill shrub (SS Policy). Also includes wet-moist meadows, and alfalfa and irrigated meadows when adjacent to sagebrush (WGFD CWCS).	S	MIIH	Nine leks are within four miles of allotment boundaries. BLM land provides suitable wintering and nesting habitat. All three allotments are within Focus and Core Areas. Incubating female, eggs, and/or chicks may occasionally be trampled. Ongoing livestock operations are not likely to change current use of this area by nesting sage-grouse.
Proposed for listing				
Mountain plover (*Charadrius montanus*)	Short-grass prairie with slopes < 5% (SS Policy). Low, open habitats such as arid shortgrass and mixed-grass prairies dominated by blue grama and buffalo grass with scattered clumps of cacti and forbs, and saltbush habitats of the shrub-steppe. Prefers to nest in large, flat grassland expanses with sparse, short vegetation (<=4") and bare ground. Adapted to areas that have been disturbed by prairie dogs, heavy grazing, or fire (WGFD CWCS).	S	NLJ	Suitable plover habitat is present. Birds may prefer grazed areas.

Presence
K - Known, documented observation within project area.
S - Habitat suitable and species suspected, to occur within the project area.
NS - Habitat suitable but species is not suspected to occur within the project area.
NP - Habitat not present and species unlikely to occur within the project area.

Project Effects
LAA - Likely to adversely affect
NE - No Effect
NLAA - May Affect, not likely to adversely affect individuals or habitat.
NLJ – Not likely to jeopardize continued existence
MIIH – May impact individuals and habitat
NP—Habitat not present and species unlikely to occur within the project area.

3.6.1 Candidate Species

Greater sage-grouse are being discussed in detail in this environmental assessment because they have been classified as a Candidate Species, currently warranted for listing under the Endangered Species Act (USFWS 2010) and are thus of heightened management concern in the Buffalo Field Office. Sage-grouse are also a Wyoming BLM sensitive species, and are listed as a Wyoming Game & Fish Department Species of Greatest Conservation Need.

Greater sage-grouse habitat is present on BLM lands in the Bar C Draw, Lower Red Fork, and Nelly Carr allotments. Habitat models (Doherty et al. 2007, Doherty 2008) indicate that BLM lands within the allotments contain both high quality winter and nesting habitat. This area is believed to provide winter habitat and breeding ground for a number of sage-grouse that reside at high elevations in the southern Bighorn Mountains during the summer months. Two of these birds were located within 3 miles of the Bar C Draw allotment in November 2009 and September 2010 (BLM 2011).

The three allotments are located within a BLM Focus Area as well as a WGFD Core Area. There are no known leks within the allotments, but the Aperry and Clay Pit leks are 0.6 and 1.5 miles, respectively, from the boundaries of the Nelly Carr and Lower Red Fork Allotments. The Guzzler, Guzzler West, Old Man Spring, Perry Reservoir, Poker Creek, Red Wall, and Red Wall-State leks are located within 4 miles of the allotments, primarily to the south of the Bar C Draw Allotment.

3.6.2 Big Game

Big game species expected to occur within the Bar C Draw, Lower Red Fork, and Nelly Carr allotments include whitetail deer, pronghorn, and mule deer. WGFD data indicate that the allotments contain yearlong seasonal ranges for all three species. The Bar C Draw allotment also contains crucial winter range for mule deer. Crucial range is seasonal habitat which is a determining factor in a population's ability to maintain itself.

Populations of pronghorn and whitetail deer within their respective hunt areas were above WGFD objectives, as of the most recent available report, which was released in 2009 (WGFD 2009a). Populations of mule deer were below their WGFD objective.

4.0 ENVIRONMENTAL EFFECTS

This section describes the environmental consequences of the no action alternative (Alternative A), and those of the proposed action, Alternative B. The effects analysis addresses the direct and indirect effects of implementing the proposed action, the cumulative effects of the proposed action combined with reasonably foreseeable Federal and non-federal actions, identifies mitigation measures, and discloses any residual effects.

4.1 Direct and Indirect Effects

4.1.1 Cultural Resources

Alternative A- No Grazing

The absence of grazing will not result in impacts to cultural resources.

Alternative B- Preference Transfer & Lease Issuance

Any activity that removes vegetation or leads to soil erosion can cause impacts to cultural resources. Livestock concentration areas (such as those that form near water sources, supplemental feeding areas, fence corners, etc.) and livestock trail formation may result in impacts to cultural resources. According to the State Protocol Agreement between the Wyoming BLM and the Wyoming SHPO, grazing lease renewals that do not include seasonal grazing changes or changes in livestock types are exempt from case-by-case review. As per Appendix B item #27 and following section IV(A)(3) of the Wyoming State Protocol, on 3/17/11 the Bureau electronically notified the Wyoming State Historic Preservation Office (SHPO) of this grazing lease renewal.

4.1.2 Livestock Grazing

Alternative A- No Grazing

The Federal Land Policy and Management Act of 1976 (FLPMA) requires the BLM to manage public lands and resources according to the principals of multiple use and sustained yield, including recognizing the Nation's need for domestic sources of minerals, food, timber, and fiber. In addition, FLPMA also requires the BLM to give two years' prior notification whenever a permit or lease for grazing domestic livestock is cancelled in whole or in part, in order to devote the lands covered by the permit or lease to another public purpose; including disposal, except in an emergency.

The Buffalo RMP states as a resource management decision that *livestock grazing is allowed on all public lands in the resource area except on about 6,000 acres where it has been determined to be incompatible with other resource uses or values.*

There are no fences or natural barriers separating BLM and non-BLM lands. It would not be practical or cost effective to fence out the public lands at this time. Should extraordinary circumstances arise, such as the identification of an endangered plant or damageable cultural resource on the site, fencing may be a greater priority, and would be addressed in a separate EA. If the public lands are not leased, and subsequently not fenced, any livestock use occurring on them would be unauthorized. This alternative would affect how the adjacent private and State lands are grazed since the operator would have to keep livestock off of public lands either through herding or fencing, or be in violation of federal grazing regulations. Herding would be difficult, due to the mixed ownership pattern and still would not assure public lands would not be grazed. A rider would have to be kept with livestock at all times. Because it would not be economically feasible for the BLM to fence all federal land parcels, fences would most likely be constructed on private land, fragmenting the area and making BLM unable to stipulate wire spacing to facilitate wildlife movement. Most four-strand fences on private land have a top wire of 46-48 inches with 10-12 inch wire spacing and all wires are barbed. In the absence of fences, the BLM would have to constantly supervise the public lands to assure they are not being grazed.

No adverse resource impacts resulting from livestock grazing have been identified which would warrant cancellation of all grazing on these allotments. Denying the renewal of these grazing leases would not be in compliance with FLPMA or in conformance with the Buffalo RMP and would require an RMP amendment to remove the grazing preference from the RMP grazing base. The Buffalo RMP allows for adjustment of forage allocation based on an evaluation of

monitoring, field observations, or other data as needed. Additionally, changes in grazing practices can be effective in mitigating impacts without a corresponding reduction in forage allocation.

Alternative B- Preference Transfer & Lease Issuance

Rangeland vegetation inventory (MRB, 1957) data indicates an adequate amount of forage is available to support the proposed number of livestock and for wildlife use and the effects of that use within these allotments. The new grazing leases would authorize the same numbers and kind of livestock relative to each pasture, and season of use as the existing lease. No changes to grazing management are proposed with these lease transfers. Therefore the issuance and transfer of the proposed grazing leases is not expected to have any effects on range management.

4.1.3 Invasive Species/Noxious Weeds

Alternative A- No Grazing

Removing livestock grazing from the public land can promote growth—and potential overgrowth—of perennial grasses and forbs, thus crowding out or reducing the potential for invasion of noxious and/or invasive species. However, the overgrowth of vegetation increases the availability of fine fuels, which also increases the risk of wildfire. These fires would also be more intense, allowing opportunistic noxious and invasive species to colonize the public lands. Cooperative weed control efforts could discourage overgrowth of vegetation and decrease the fire return interval.

Alternative B- Preference Transfer & Lease Issuance

Implementing appropriate grazing use, as described in the Proposed Action, along with ongoing cooperative weed control efforts, benefits the health of the native plant community. A healthy native plant community often provides competition against the establishment and/or spread of noxious weeds. Issuing the grazing leases will not result in any additional impacts in relation to the spread of noxious weeds.

4.1.4 Wildlife, Threatened & Endangered, and Sensitive Species

Alternative A- No Grazing

Removing grazing from the allotments would have "no effect" on black-footed ferret, blowout penstemon, and Ute ladies'-tresses orchid, because there is no suitable habitat for these species. Cancelling grazing may have a negative impact on mountain plover, burrowing owls, and black-tailed prairie dogs by reducing the number of grazed areas, which provide preferred habitat for these species.

Alternative B- Preference Transfer & Lease Issuance

(See tables in Section 3.6)

The proposed action will have "no effect" on black-footed ferret, blowout penstemon, and Ute ladies'-tresses orchid, as suitable habitat for these species is not present in the allotments. The proposed action is "not likely to jeopardize"—and may benefit—mountain plover, because the birds prefer areas with little vegetative cover (Derner et al. 2009).

4.1.4.1 Candidate Species

Under the no grazing alternative, no benefits to sage-grouse habitat as a result of grazing management would occur. Excluding livestock does not necessarily cause an area to return to its pre-grazing ecological condition or guarantee improvements in species richness, diversity, or vegetative production (Manier and Hobbs 2007). Some habitats reach a threshold where livestock exclusion does not have an effect on the current trend (Wambolt and Payne 1986, Sanders and Voth 1983). Other research suggests that rest from livestock grazing in Wyoming big sagebrush habitats may improve understory production while decreasing sagebrush cover (Wambolt and Payne 1986). On Wyoming big sagebrush sites with dense sagebrush and annual grass understory, eliminating livestock grazing can increase fire risk which results in habitat degradation (Peters and Bunting 1994, West 1999).

Alternative B- Preference Transfer & Lease Issuance

The proposed action "will impact" greater sage-grouse. Livestock grazing can benefit or degrade sage-grouse habitat on the allotments, depending on the timing, stocking rate, and habitat affected. Fall grazing may favor upland forb production, and spring grazing may be used to remove herbaceous cover and make forbs more accessible (Smith et al. 1979, Fulgham et al. 1982). Spring and early summer grazing may help control invasive weeds and remove woody plants, thereby decreasing the risk of wildfire that could remove large areas of habitat (Mosley 1996, Olson and Wallander 2001, Meritt et al. 2001, Riggs and Urness 1989).

For over a century, the dominant land use in the Powder River Basin and on the allotments has been livestock grazing. In light of this land use, sage-grouse continue to persist in the area.

Excessive or poorly managed grazing causes degradation of sagebrush ecosystems and thus sage-grouse habitat (BLM 2002). Inappropriate grazing management in uplands can reduce perennial grasses and forbs while favoring annual grasses and increasing sagebrush cover (Branson 1985, Tisdale 1994, Beck and Mitchell 2000, Bork et al. 1998). This may impact sage-grouse, because they rely on perennial grasses for escape cover and residual herbaceous cover for screening cover in nesting habitat. Forbs are positively associated with survival and recruitment of sage-grouse chicks. Inappropriate grazing that damages meadows and riparian areas can harm sage-grouse, because these areas are critical for sage-grouse in late summer. Livestock may occasionally trample sage-grouse nests or cause sage-grouse to abandon their nests (Call 1979, Patterson 1952).

Livestock grazing has occurred historically on these allotments and the BLM expects no additional impacts, other than those that have already taken place as a result of long-term use, from implementation of the proposed action. Continuing to manage for the Wyoming Standards for Rangeland Health will ensure sage-grouse habitat viability.

4.1.4.2 Big Game

Alternative A- No Grazing

Under the no grazing alternative, no improvement in winter browse conditions for big game would occur. Herbaceous species may encroach and ultimately out-compete shrub species, resulting in a reduction in quality of big game winter range (Smith 1949). There would also be no improvement in forage from removal by livestock of unpalatable standing dead material.

Alternative B- Preference Transfer & Lease Issuance

Managing land to meet Rangeland Health Standards should result in overall improved rangeland conditions, thereby improving overall forage for deer and pronghorn.

Mule deer populations are typically limited by forage resources on winter ranges (Clements and Young 1997). Livestock grazing tends to favor shrubs over grasses, and thus may provide more desirable winter browse conditions on the allotments (Austin and Urness 1996, Austin et al. 1986, Smith 1949).

Livestock grazing may enhance big game forage by reducing unpalatable standing dead material (Short and Knight 2003). There would be minor competition for forage between livestock and big game. There is very little dietary overlap between cattle, pronghorn, and deer during spring and early summer, since cattle feed primarily on grasses while pronghorn and deer select mostly forbs and some grasses. Competition would increase in late summer and fall as cattle begin to use more forbs. Pronghorn and deer increase the amount of shrubs in their diet in fall and winter, so competition would be reduced during those seasons (Anderson and McCuistion 2008).

Moderate grazing by sheep in late summer has been shown to have no effect on vegetative composition or production in sagebrush-grass range (Harniss and Wright 1982), and, therefore, appropriate sheep management is not expected to impact pronghorn or deer on the allotments.

There are some fences on the allotments, which may pose a hazard to mule deer and pronghorns. There have been observations in the Buffalo Field Office of deer and antelope that have been caught on fences. This hazard could be reduced by modifying fence where livestock use is cattle only to a more wildlife "safe" design with height under 48 inches and the bottom wire 16 inches from the ground.

Livestock grazing has occurred historically on these allotments, and no additional impacts, other than those that have already taken place as a result of long-term use, are expected to occur as a result of implementation of the proposed action.

4.2 Cumulative Effects

Cumulative effects are those resulting from the incremental impact of an action when added to other past, present, or reasonably foreseeable actions regardless of what agency or person undertakes such other actions. Identified actions include noxious weed control and sage-grouse protection. If negative impacts are identified during implementation of the grazing lease, which result in rangeland health standards not being met, they are required to be addressed before the start of the next grazing season under 43 CFR 4180.

The Bar C Draw, Lower Red Fork, and Nelly Carr Allotments will continue to be managed to achieve the Wyoming Standards for Rangeland Health. All elements of the environment would benefit from rangelands in good health. No projects are proposed in connection to these lease issuances, and the terms and conditions of the leases will remain the same. Therefore cumulative impacts from the proposed action should be minor, if there are any.

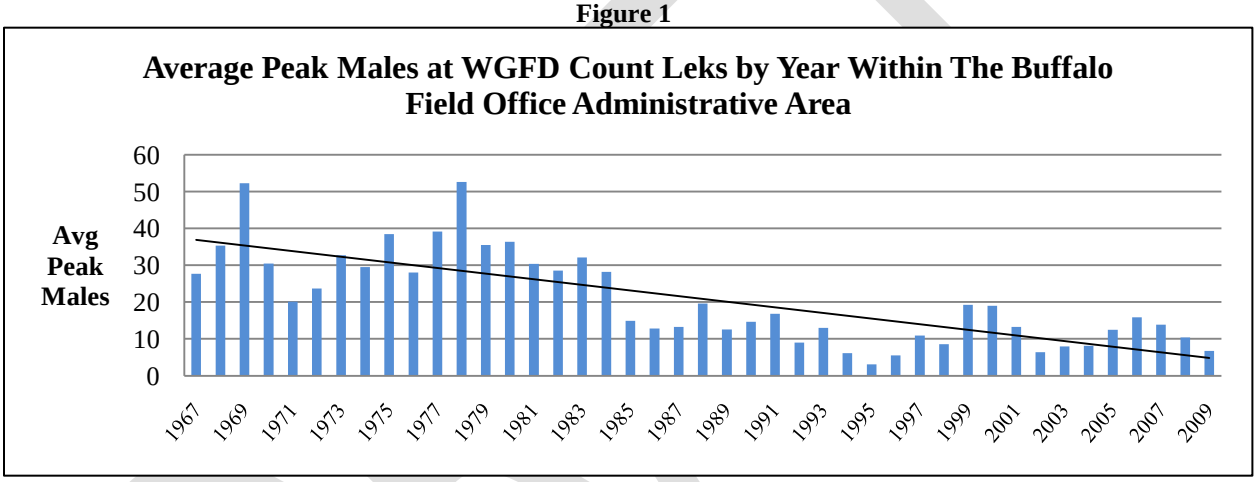
4.2.1 Noxious Weeds

Noxious weeds/invasive non-native plants are present within the assessment area to varying degrees. Livestock grazing may benefit certain weeds be reducing competition with grasses but may also help control other species through defoliation. Currently the BFO is addressing the situation by mapping weed locations and treating them with herbicides or bio-controls, in conjunction with the local Weed and Pest organizations.

4.2.2 Sage-grouse

The sage-grouse population within northeast Wyoming is exhibiting a steady long term downward trend (WGFD 2008a, USFWS 2010). The figure below illustrates a ten-year cycle of periodic highs and lows. Each subsequent population peak is lower than the previous peak. Long-term harvest trends are similar to that of lek attendance (WGFD 2008b). Declines can be primarily attributed to habitat fragmentation (USFWS 2010). The leks near the allotments have maintained relatively steady attendance, but attendance has decreased since peaking in 2007.

Figure 1



Average peak number of male sage-grouse per active lek and trend line within the BFO 1967-2009

4.3 Mitigation Measures Considered

The terms and conditions included as part of the term grazing lease would mitigate anticipated impacts. No additional mitigation measures are proposed.

4.4 Residual Effects

No residual impacts are associated with the proposed action.

5.0 Tribes, Individuals, Organizations or Agencies Consulted

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6.0 List of Preparers

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6.1 List of Reviewers, BLM Buffalo Field Office

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Jennifer Morton	Wildlife Biologist	Wildlife, Migratory Birds
Ardeth Hahn	Archaeologist	Cultural Resources
Janelle Gonzales	Rangeland Management Specialist	Invasive Species
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John Kelley	Planning & Environmental Coordinator	NEPA Planning

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